

In The Claims

Please cancel claims 8-13 and 18-20.

1 1 (Previously Amended). Method of processing X streams of information symbols to be
2 transmitted on Y communication channels, X and Y being positive integers, wherein the Y
3 communication channels simultaneously occupy a transmission resource organized as
4 successive frames, wherein the successive frames include compressed-mode frames each
5 having at least one inactive period during which no symbol is transmitted, wherein the
6 information symbols of each stream i ($1 \leq i \leq X$) are transmitted in successive transmission
7 time intervals each comprising F_i consecutive frames, F_i being a positive integer, and wherein,
8 for each transmission time interval relating to a stream i ($1 \leq i \leq X$), integers E_i , ΔN_i^{TPI} and
9 ΔN_i^{CM} are defined such that $E_i > 0$, $\Delta N_i^{\text{CM}} < 0$ if said transmission time interval comprises at
10 least one compressed-mode frame and $\Delta N_i^{\text{CM}} = 0$ if said transmission time interval does not
11 comprise any compressed-mode frame, the method comprising the following steps for each
12 transmission time interval relating to a stream i ($1 \leq i \leq X$):

13 forming a first sequence of E_i coded symbols from information symbols of said stream
14 pertaining to said transmission time interval;

15 forming a second sequence of symbols including $E_i + \Delta N_i^{\text{TPI}} + \Delta N_i^{\text{CM}}$ symbols extracted
16 from the first sequence and $-\Delta N_i^{\text{CM}}$ marked symbols;

17 forming a third sequence of symbols by a permutation of the symbols of the second
18 sequence;

19 distributing the symbols of the third sequence into F_i segments of consecutive symbols,
20 the F_i segments being respectively assigned to the frames of said transmission time interval; and

for each frame of said transmission time interval, forming a fourth sequence of symbols extracted from the segment assigned to said frame, said permutation and the placing of the marked symbols in the second sequence when said transmission time interval comprises at least one compressed-mode frame being such that each marked symbol belongs, in the third sequence, to a segment assigned to a compressed-mode frame, and the following steps for each frame:

forming a fifth sequence of symbols including the symbols of the fourth sequence output for said frame in relation to each stream;

distributing the symbols of the fifth sequence into Y segments of symbols, the Y segments being respectively assigned to the Y communication channels;

for each communication channel, forming a sixth sequence of symbols extracted from the segment assigned to said communication channel;

for each communication channel, forming a seventh sequence of symbols by a permutation of the symbols of the sixth sequence; and

transmitting on each communication channel, in time slots of said frame, symbols extracted from the seventh sequence, each of said marked symbols being deleted before transmission on each communication channel when said frame is in compressed mode, so as to provide said inactive period within the frame.

2. (Previously Amended) Method according to Claim 1, wherein said marked symbols are kept until the seventh sequences when said frame is in compressed mode, without being extracted from the seventh sequences for transmission.

3. (Previously Amended) Method according to Claim 1, wherein additional marked symbols are inserted into the second or the fifth sequence, these symbols being kept until the seventh sequences so as to be transmitted with zero transmission power.

4. (Previously Amended) Device for processing X streams of information symbols to be transmitted on Y communication channels, X and Y being positive integers, the Y communication channels simultaneously occupying a transmission resource organized as successive frames, the successive frames including compressed-mode frames each having at least one inactive period during which no symbol is transmitted, the information symbols of each stream i ($1 \leq i \leq X$) being transmitted in successive transmission time intervals each comprising F_i consecutive frames, F_i being a positive integer, integers E_i , ΔN_i^{TTI} and ΔN_i^{CM} being defined for each transmission time interval relating to a stream i ($1 \leq i \leq X$), with $E_i > 0$, $\Delta N_i^{CM} < 0$ if said transmission time interval comprises at least one compressed-mode frame and $\Delta N_i^{CM} = 0$ if said transmission time interval does not comprise any compressed-mode frame, the device comprising:

means for forming a first sequence of E_i coded symbols from information symbols of each stream i ($1 \leq i \leq X$) pertaining to a transmission time interval;

means for forming, for each transmission time interval relating to a stream i ($1 \leq i \leq X$), a second sequence of symbols including $E_i + \Delta N_i^{TTI} + \Delta N_i^{CM}$ symbols extracted from the first sequence and $-\Delta N_i^{CM}$ marked symbols;

means for forming a third sequence of symbols by a first permutation of the symbols of each second sequence;

means for distributing the symbols of each third sequence, formed for a transmission time interval relating to a stream i ($1 \leq i \leq X$), into F_i segments of consecutive symbols respectively assigned to the frames of said transmission time interval, and for forming F_i fourth sequences of symbols respectively extracted from the segments assigned to said frames;

means for forming, for each frame, a fifth sequence of symbols including the symbols of the fourth sequence output for said frame in relation to each stream i ($1 \leq i \leq X$);

means for distributing the symbols of each fifth sequence into Y segments of symbols respectively assigned to the Y communication channels;

means for forming a sixth sequence of symbols extracted from the segment assigned to each communication channel; and

means for forming a seventh sequence of symbols by a second permutation of the symbols of each sixth sequence, and for transmitting, in time slots of each frame on each communication channel, symbols extracted from the seventh sequence, wherein the first permutation and the placing of the marked symbols in the second sequence, formed for a transmission time interval relating to a stream when said transmission time interval comprises at least one compressed-mode frame, are such that each marked symbol belongs, in the third sequence formed for said transmission time interval, to a segment assigned to a compressed-mode frame, each of said marked symbols being deleted before transmission on each communication channel so as to provide said inactive period within the frame.

5. (Previously Amended) Device according to Claim 4, wherein the means for forming the third, fourth, fifth, sixth and seventh sequences of symbols are arranged to keep

3 said marked symbols until the seventh sequences formed for each compressed-mode frame,
4 whereby said marked symbols are not extracted from the seventh sequences for transmission.
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1 6. (Previously Amended) Device according to Claim 4, comprising means for
2 inserting, into the second or fifth sequences, additional marked symbols which are kept until the
3 seventh sequences so as to be transmitted with zero transmission power.
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5 Claims 7-14 (Canceled).
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1 15. (Previously presented) Radiocommunication base station comprising source
2 means for providing X streams of information symbols to be transmitted on Y communication
3 channels simultaneously occupying a transmission resource organized as successive frames, X
4 and Y being positive integers, processing means for forming sequences of output symbols from
5 said X streams of information symbols, and transmission means for transmitting said sequences
6 of output symbols on the Y communication channels, wherein the successive frames include
7 compressed-mode frames each having at least one inactive period during which no symbol is
8 transmitted, the information symbols of each stream i ($1 \leq i \leq X$) being transmitted in
9 successive transmission time intervals each comprising F_i consecutive frames, F_i being a
10 positive integer, wherein integers E_i , ΔN_i^{TTI} and ΔN_i^{cm} are defined for each transmission time
11 interval relating to a stream i ($1 \leq i \leq X$), with $E_i > 0$, $\Delta N_i^{cm} < 0$ if said transmission time
12 interval comprises at least one compressed-mode frame and $\Delta N_i^{cm} = 0$ if said transmission time
13 interval does not comprise any compressed-mode frame, wherein the processing means
14 comprise:

15 means for forming a first sequence of E_i coded symbols from information symbols of
 16 each stream i ($1 \leq i \leq X$) pertaining to a transmission time interval;
 17 means for forming, for each transmission time interval relating to a stream i ($1 \leq i \leq X$),
 18 a second sequence of symbols including $E_i + \Delta N_i^{TTI} + \Delta N_i^{cm}$ symbols extracted from the first
 19 sequence and $-\Delta N_i^{cm}$ marked symbols;
 20 means for forming a third sequence of symbols by a first permutation of the symbols of
 21 each second sequence;
 22 means for distributing the symbols of each third sequence, formed for a transmission
 23 time interval relating to a stream i ($1 \leq i \leq X$), into F_i segments of consecutive symbols
 24 respectively assigned to the frames of said transmission time interval, and for forming F_i fourth
 25 sequences of symbols respectively extracted from the segments assigned to said frames;
 26 means for forming, for each frame, a fifth sequence of symbols including the symbols of
 27 the fourth sequence output for said frame in relation to each stream i ($1 \leq i \leq X$);
 28 means for distributing the symbols of each fifth sequence into Y segments of symbols
 29 respectively assigned to the Y communication channels;
 30 means for forming a sixth sequence of symbols extracted from the segment assigned to
 31 each communication channel; and
 32 means for forming one of said sequences of output symbols by a second permutation of
 33 the symbols of each sixth sequence,
 34 wherein the first permutation and the placing of the marked symbols in the second sequence,
 35 formed for a transmission time interval relating to a stream when said transmission time
 36 interval comprises at least one compressed-mode frame, are such that each marked symbol
 37 belongs, in the third sequence formed for said transmission time interval, to a segment assigned

38 to a compressed-mode frame, each of said marked symbols being deleted before transmission
39 on each communication channel so as to provide said inactive period within the frame.

1 16. (Previously presented) Base station according to Claim 15, wherein the means
2 for forming the third, fourth, fifth and sixth sequences of symbols and the sequences of output
3 symbols are arranged to keep said marked symbols until the sequences of output symbols
4 formed for each compressed-mode frame, whereby said marked symbols are not extracted from
5 the sequences of output symbol for transmission.

17. (Previously presented) Base station according to Claim 15, wherein the
processing means further comprise means for inserting, into the second or fifth sequences,
additional marked symbols which are kept until the sequences of output symbols so as to be
transmitted with zero transmission power.

Claims 18-20 (Canceled).